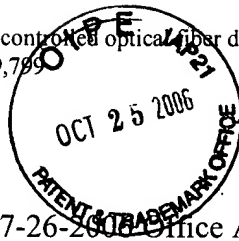


Remarks



To reply the 7-26-2006 Office Action (O.A.), Applicant has amended claims 21-22, 24 and 26 to overcome the technical rejections and define the invention patentable over the prior art.

Please see all previous Replies, especially 12-5-2005 Reply, which have addressed the claimed features patentable over prior art, including JP 06-206734.

Please notice that the 6-6-2005 O.A. improperly cites an incorrect translation (dated 9-23-04) of JP 06-206734 in the file, because the translation is done by computer with clearly known mistakes as acknowledged by Japan Patent Office in the translation "Notice" in the file. It is not proper to use incorrect translation for decision or action.

In the 9-6-2005 and 12-5-2005 Replies, Applicant provides a correct translation of the "Means for Solving the Subject" of Kohei [JP 06-206734, 0007]. Now, Applicant will provide a correct translation of the whole Kohei's JP 06-206734 as attached to this Reply.

Applicant respectfully requests the PTO to consider each one of the points, facts, evidences and arguments, especially the cited laws, court decisions and MPEP in this Reply and all his previous Replies. In the following, if the mentioned O.A. is without a specific date, it is of 7-26-2006.

The above amended claims are in correct form and patentable over prior art for the reasons as listed in the Reply of 9-6-2005 and below.

I. Applicant's Thanks and Appreciations and Request

I.1. Applicant again expresses his thanks to the Honorable Under Secretary of Commerce for Intellectual Property and Director of the USPTO Jon Dudas and the Honorable Commissioner for Patents John Doll for their very helpful advice and consideration.

I.2. Applicant thanks the new Examiner Ms. Dionne Mayes for her time and constructive and helpful discussion and suggestions through the telephonic interview of 10-10-2006.

I.3. Applicant appreciates the second Examiner Mr. Sean Vincent for his allowing Claims 37-39.

- I.4. Applicant would like again to thank the SPE Mr. Steven Griffin for his time and constructive and helpful discussion and suggestions through the telephone discussion of 4-27-2006, and a Senior Examiner Mr. Peter Chin for his special time and constructive and helpful discussion and suggestions through the interview of 3-11-2005.**
- I.5. Applicant thanks the SPE and the second Examiner for their writing one allowable claim for the present invention to respond the applicant's respectful request for constructive assistance pursuant to MPEP 707.07(j).**
- I.6. Applicant respectfully requests the new Examiner to make a correct decision, and to follow MPEP 707.07(f) Answer All Material Traversed – "Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it".**
- I.7. From all Replies, it is clear that the amended claims of the present invention are patentable over the prior art. Therefore applicant respectfully submits that this application is now in condition for allowance, which action he respectfully solicits.**

II. Response to the Claim Rejections – 35 USC §112

II.1. Claim 21 has been amended to obviate the objection to Claims 21-22 and 24-25.

Claim 21 has been amended as "... .. heating and melting said ~~perform for said optical fiber;~~
... .." as suggested in the O.A. item 5 [p.2]. Thus, the rejection of the O.A. items 3-5 has been obviated.

II.2. Claim 26 has been amended to obviate the objection of the O.A. item 6-11 [p.3].

- (1) Claim 26: "... .. heating and melting a preform in a furnace ~~for the optical fiber;~~ [for item 6, as suggested by the O.A.]**

while heating and melting, drawing said optical fiber from said preform ~~to form said optical fiber;~~ [for item 9]

**measuring the outer diameters of said optical fiber, when that ~~which is bare before coating,~~
at two or more different locations by respective measurement devices ~~before the coating,~~ [for**

item 7]

... ..

providing a control system with the measurement data from ~~all these~~ said measurement devices respectively at the different locations, [for item 8, as suggested by the Examiner]

wherein said control system

has a first preselected value,

calculates the deviation of the measurement of, and

controls a fiber drawing speed and a preform feeding speed for”.

(2) The amended Claim 26 obviates the rejection of items 6 and 8 by taking the new Examiner’s suggestion and the O.A. suggestion.

(3) Claim 26 has deleted the words “before coating” in line 6, and “before the coating” in line 7. Claim 26 really has a coating method step in line 13. Thus, the rejection of item 7 is obviated.

(4) The rejection of item 9 in the O.A. has been overcome by deleting “to form said optical fiber”.

Applicant keeps the description of “drawing said optical fiber from said perform”, because it precisely/correctly presents the process, in view of the fact that the optical fiber drawing process is drawing said optical fiber from said perform.

Please see the Fiber Drawing Capstans 13 which is drawing said optical fiber from said preform in Figures 1-11, as well as “the fiber drawing speed” and “the preform feeding speed” in the Specification and the claims.

Also, please see “drawing the fiber from the preform” in Harding (Col. 1, L.54-55).

Further, please see the O.A. p.4, item 16, lines 2-3, “a fiber was drawn at a drawing speed from the preform” in Harding’s process. [emphasis added]

Moreover, please see the Record of Interview of 6-16-2006, in which the Examiner Mr. Vincent has agreed to Applicant’s opinion as stated above. The SPE also agreed during the discussion of 4-27-2006.

By the above amendment and explanation, Applicant respectfully submits that the rejection of item 9 should be withdrawn.

- (5) The O.A. item 10 states “Claim 26, line 20 is unclear because ‘calculates’ should be ‘calculating’, otherwise the tense of the claim is inconsistent and reads as though a separate process is being conducted alongside the first claimed process.”

In fact, it is that “wherein said control system” [line 16] “has ...” [lines 17-19], “calculates ...” [lines 20-22], and “controls ...” [line 23].

Therefore, they are in said process and not a separate process.

Thus, Applicant respectfully submits that the rejection should be withdrawn.

Applicant appreciates the new Examiner for her agreeing with the explanation.

- (6) The rejection of item 11 should also be withdrawn. Please see the above explanation.

- (7) Applicant thanks the new Examiner for her helpful suggestions to solve all these §112 issues during the telephone interview of 10-10-2006.

III. Response and Rebuttal to the Claim Rejections (35 USC §103).

Claims 21-22 and 24-25 Are Unobvious and Patentable Over Harding 4793840 and Yamamura 6220057.

III.1. Claim 21 is Unobvious and Patentable Over Harding and Yamamura.

The O.A. [pp.4-5] is in error because the rejections on Harding and Yamamura are in error, and the O.A. fails to comply with the law, court decisions and MPEP, especially MPEP 706.02(j), 2141, 2141.02, 2142, 2143.01, 2143.03, 2145II, 707.07(f), 2145X.D.2.

The key facts, grounds and reasons are as follows:

- The proposed combination lacks motivation because there is no any teaching or suggestion in the references and prior art, or generally available knowledge for the ordinary skills to do the proposed combination [MPEP 2141, 706.02(j), 2142, and wherein the court decisions].**

- **The proposed combination or modification of the references is as being based on hindsight from the present invention [MPEP 2141(C)].**
- **The proposed combination of Harding and Yamamura is inoperable and destroys the both references processes [MPEP 2141(D), 2142, wherein the court decisions].**
- **Even as proposed combination or modification, the resultant teachings of Harding and Yamamura still omit the claimed key steps in Claim 21 [MPEP 2141, 706.02(j), wherein the court decisions].**
- **The O.A. fails to show that all claim limitations must be taught or suggested by the prior art [MPEP 2143.03, 2141, 706.02(j), wherein the court decisions].**
- **The proposed combination or modification changes the reference operation principles, that is impermissible [MPEP 2143.01, wherein the court decision].**
- **The references teach away from the claimed present invention in view of different goals and methods and operation principles [MPEP 2141.02, 2145X.D.2, wherein the court decisions].**
- **The O.A. fails to establish a prima facie case of obviousness because the proposed combination is inoperable, omits the claimed key steps, changes the operation principle of the primary reference, and fails to follow the law, the court decisions and MPEP as mentioned above and below [MPEP 706.02(j), 2141, 2142, wherein the court decisions].**
- **The O.A. viewed the references with the benefit of impermissible hindsight vision afforded by the claimed invention because the fact is that a series of the issued patents lack the claimed invention control principle and key steps [MPEP 2141(C)].**
- **Item 19 of the O.A. is in error because there is no fact and ground for the O.A. citation of the decision [MPEP 2145II wherein the court decision, 707.07(f), 7.37.07].**
- **Items 17, 18 and 20 of the O.A. are in error because Harding's process lacks claimed robust control "against deviations of the preform outer diameter or shape at different locations and against deviations of various performs" in view of its lack of claimed key steps; Yamamura's glass ingot (or preform) drawing process does not measure the**

diameter of the preform for an optical fiber before it was heated and drawn; and the O.A. fails to provide facts and grounds for the rejection, fails to consider the present invention as a whole and the reference as a whole, and fails to recognize the facts [MPEP 2141].

- **Thus, the O.A. rejection lacks reasonable grounds, and is in error or mistake, and fails to follow the 35 USC 103, court decisions and MPEP policy 706.02(j), 2141, 2141.02, 2142, 2143.01, 2143.03, 707.07(f), 2145II, 2145X.D.2, as pointed out below in detail.**

III.2. There is no motivation to make the O.A. proposed combination or modification of Harding and Yamamura because there is no any teaching or suggestion in the references or generally available knowledge for the ordinary skills to make this proposed combination or modification.

Moreover, it is a fact that the O.A. fails to follow MPEP 2143.01 and the court decision because the proposed combination renders the prior art unsatisfactory for its intended purpose in view of the inoperable combination. Thus, there is no suggestion or motivation to make the proposed combination or modification.

Therefore, the rejection is as being based on hindsight from the piece of the present invention. On the other hand, the present invention does not combine two distinct and separate processes of a preform manufacturing and an optical fiber drawing. It is an optical fiber drawing process.

- (1) The fact and the evidence is clearly that Yamamura is in other scope and content, and does not teach or suggest for combining or modifying features of the references.**

Yamamura's process is for drawing a glass ingot, or at best a preform for an optical fiber, as he stated in the Field of the Invention [col.1, lines 5-10].

It is a well-known fact that optical fiber manufacturing has two major distinct and separated processes, i.e., its preform manufacturing and the optical fiber drawing. It has been described in book. They are totally separated processes and not combined due to a lot of technical difficulties. Please refer to the prior art and practice in the world as evidence.

- (2) **The O.A. fails to show the evidence of teaching or suggestion in the references, or generally available knowledge to an ordinary skill for the proposed combination.**
- (3) **The O.A. fails to show what the examiner's suggested combined process is or looks like from the references teaching or suggestion or generally available knowledge.**
- (4) **The most important is the fact that the proposed combination of these two different processes is inoperable and against the reference Harding's operation principle as further shown below.**
- (5) **How can an ordinary skill one in the art would be motivated to do an inoperable combination of these different processes without any suggestion in these references and without any publicly/generally available knowledge for this proposed combination?**
- (6) **The O.A. fails to follow MPEP 2143.01 and the court decision because the proposed combination renders the prior art unsatisfactory for its intended purpose of fast and quality manufacturing in view of the inoperable combination and the court decision.**

MPEP 2143.01 THE PROPOSED MODIFICATION CANNOT RENDER THE PRIOR ART UNSATISFACTORY FOR ITS INTENDED PURPOSE

If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)

- (7) **That the suggestion to combine the references should not come from applicant was forcefully stated in Orthopedic Equipment Co. v United States, 217 USPQ 193, 199 (CAFC 1983):**

"It is wrong to use the patent in suit [here the patent application] as a guide through the maze of prior art references, combining the right references in the right way to achieve the result of the claims in suit [here the claims pending]. Monday morning quarterbacking is quite improper when resolving the question of nonobviousness in a court of law [here the PTO]."

Applicant would further cite the following, as was further stated in Uniroyal, Inc. v. Rudkin-Wiley Corp., 5 USPQ2d 1434 (CAFC 1988),

"[w]here prior-art references require selective combination by the court to render obvious a subsequent invention, *there must be some reason for the combination other than the hindsight*

gleaned from the invention itself. ... Something in the prior art must suggest the desirability and thus the obviousness of making the combination.” [emphasis added]

- (8) Another fact is that the O.A. of 6-6-2005 [p.17, L.17-18] has clearly recognized that “Examiner completely understands this – no rejection indicates the motivation comes from the references themselves.”

Furthermore, that O.A. (6-6-2005) states “**Presently**, one of ordinary skill would combine the relevant teachings to obtain ‘dramatic improvement’ and a significantly more robust process” [p.17, L.18-20]. [emphasis added]

Here, a key word is “**Presently**” that the O.A. of 6-6-2005 states and recognizes.

This is objective evidence that the motivation for combining or modifying features of the references is as being based on hindsight from the present invention which applicant submitted in 2000.

- (9) The fact is that the O.A. fails to show the motivation for the proposed combination or modification. The fact is that there is no motivation as pointed out.

- (10) Furthermore, in view of the fact of issuing a series of patents of Harding, Yoshimura, Urruti, Kohei, Saito, Yamamura, and others, an objective evidence and the fact is that these experts and inventors have no motivation in their teachings or suggestions for the O.A. proposed combination or modification for more than a decade. How would an ordinary skill be motivated to do the O.A. proposed combination or modification?

- (11) MPEP 706.02(j) states:

“To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some **suggestion or motivation**, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest **all the claim limitations**. **The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure.** *In re Vaeck*, 947 F.2d

488, 20 USPQ2d 1438 (Fed. Cir. 1991). See 706.02(j) See MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria.”

“To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious **in light of the teachings of the references.**” *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). [emphasis added]

(12) MPEP 2141 BASIC CONSIDERATIONS WHICH APPLY TO OBVIOUSNESS REJECTIONS:

When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to:

(A) The claimed invention must be considered as a whole;

(B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;

(C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and

(D) Reasonable expectation of success is the standard with which obviousness is determined.

Hodosh v. Block Drug Co., Inc., 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

“[... .. as above-cited] *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See 706.02(j) See MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria”

(13) MPEP 2142 ESTABLISHING A PRIMA FACIE CASE OF OBVIOUSNESS

Please see In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) as cited above.

(14) Thus, the O.A. fails to follow MPEP 706.02(j), 2141, 2142, 2143.01 and the cited court decisions.

(15) Thus, Applicant respectfully submits that the rejection based on combination or modification of Harding and Yamamura should be withdrawn.

III.3. Because of no motivation, the proposed combination or modification is based on hindsight, that is impermitted by the Office policy – MPEP 2141 BASIC CONSIDERATIONS WHICH APPLY TO OBVIOUSNESS REJECTIONS, specifically as pointed out as follows:

(C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention.

III.4. The proposed combination of Harding and Yamamura is inoperable. Thus, the O.A. fails to comply with MPEP 2142, 2143.01 and 2145III and the court decisions because the proposed combination renders the prior art unsatisfactory for its intended purpose in view of the inoperable combination.

One basic criterion is that “there must be a reasonable expectation of success” *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) [MPEP 2142, 706.02(j)].

MPEP 2143.01 THE PROPOSED MODIFICATION CANNOT RENDER THE PRIOR ART UNSATISFACTORY FOR ITS INTENDED PURPOSE

If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)

MPEP 2145 III: “... .. However, the claimed combination cannot change the principle of operation of the primary reference or render the reference inoperable for its intended purpose. See MPEP §2143.01.”

(1) It is a clear fact and evidence as listed below that if combined or modified as the O.A. suggests, their two process control systems of Harding’s and Yamamura’s would give conflict controls for preform movement, and thus destroy the references and the whole combined process. Thus, it is inoperative and destroys the references.

(i) The O.A. [p.2, item 5, L.3-5] states “Note that method claims should be written in positive step action format wherein each method step acts on the material or product made by the previous method step until the final product is complete.”

(ii) Yamamura’s process is for manufacturing glass ingot, or at best preform for an optical fiber, not an optical fiber, [“Field of the Invention”, col.1, L.5-10], while Harding’s process is for drawing the optical fiber from the preform.

(iii) Thus, the drawing speed of the product preform of Yamamura’s process will be the feeding speed of the preform of Harding’s process in the combination of Harding and Yamamura’s two processes as proposed in the O.A. statement.

(iv) Let’s consider a situation, e.g., Yamamura’s monitor 6b detects a glass ingot outer

diameter large, while Harding's process monitor 9 detects a drawn fiber outer diameter is small in a practical case.

Because Yamamura's monitor 6b detects an outer diameter large, therefore in Yamamura's process, "the take-off speed of the drawn rod" should relatively increase in order to maintain the desired rod diameter (glass ingot/preform diameter). [col. 2, lines 55-59]

Due to the combination, it means that the Yamamura's process commands to increase preform feeding speed in the Harding's process.

On the other hand, because Harding's process monitor 9 detects a fiber outer diameter small, therefore its fiber drawing speed is decreased by the command of controller 31 [col.2, lines 59-64], and the preform feeding speed to slow down by the control algorithm 21 [col.3, lines 1-20], just the opposite of what Yamamura's process commands.

The conflict commands destroy both Harding's process and Yamamura's process.

(v) Similar conflict will also happen when Yamamura's monitor 6b detects a glass ingot outer diameter small, while Harding's process monitor 9 detects a fiber outer diameter large. Then, the conflict commands of Hardin's and Yamamura's destroy both Harding's process and Yamamura's process.

(vi) Moreover, in another case, when Harding's process control needs the preform feeding speed to fast, it makes Yamamura's glass ingot (at best preform) take-off speed fast and its ingot diameter smaller, then the signals from Yamamura's outer diameter measuring device 6b will change the take-off speed to slow, just the opposite of what Harding's process needs. These conflict commands again destroy both Harding's process and Yamamura's process.

(vii) Thus, inevitable changes detected by Yamamura's monitor 6b or Harding's monitor 9 will lead to destroy both Harding and Yamamura processes by the proposed combination.

Thus, the proposed combination and modification of Harding and Yamamura is inoperable and destroys the intended operation and the both reference processes. Thus, the proposed combination and modification is not successful.

(2) **Therefore, the O.A. fails to follow one basic criterion: “there must be a reasonable expectation of success” *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) [MPEP 2141, 2142, 706.02(j)].**

(3) **It is a well-known and clear fact that fiber manufacturing has two major distinct processes, i.e., the preform manufacturing and the optical fiber drawing. They are totally separated processes and not combined due to a lot of technical difficulties. Please refer to the prior art and the practice in the world.**

(4) **The O.A. lacks analysis on feasibility of its proposed combination of Harding and Yamamura, then fails to comply with MPEP 2143.01 because the proposed combination is inoperable.**

MPEP 2143.01 THE PROPOSED MODIFICATION CANNOT RENDER THE PRIOR ART UNSATISFACTORY FOR ITS INTENDED PURPOSE

If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)

(5) **Thus, applicant respectfully submits that the rejections based on the proposed inoperable combination of Harding and Yamamura are improper and should be withdrawn. [Please also see Replies of 4-7-2005 (pp.43-44), 5-10-2005 (pp.19-20), 9-5-2005 (pp.76-77), and 12-5-2005 (pp.13-15)]**

III.5. Furthermore, the O.A. does not follow MPEP 2143.03, 2141, 2142 and 706.02(j), because, even as modified or combined of Harding in view of Yamamura, the resultant teachings still omit one or more of applicant’s claimed features as pointed out below:

- (1) Yamamura does **not** teach measuring the outer diameter of final glass ingot, i.e., at best the preform for an optical fiber, after inevitable shrinkage;
- (2) Yamamura’s last measurement of ingot is in furnace 10 [see Figs. 1 and 5];
- (3) Yamamura does **not** teach the measurement for the fiber drawing process;
- (4) Harding does **not** teach the measurement of the preform, and control signals based on the preform deviation and the fiber diameter deviation for controlling his process; thus

(5) Combination of Harding and Yamamura lacks the claimed features in Claim 21 as follows.

Moreover, for desire of working together, Applicant also further amends Claim 21.

Claim 21 recites the following claimed limitations:

- “measuring either the outer diameter or shape of a preform;”
- “providing a control system with the measured outer diameter or shape of said preform, the measured outer diameter of said optical fiber, a predetermined preform value and a predetermined fiber value for controlling said drawing process,”
- “calculating a preform deviation of the measured preform diameter or shape from the predetermined preform value, and a fiber diameter deviation of the measured fiber diameter from the predetermined fiber value;”
- “wherein the control system generates control signals based on the preform deviation and the fiber diameter deviation for controllings
the feeding speed of said preform and the drawing speed of said optical fiber;”.

(6) MPEP 2143.03 All Claim Limitations Must Be Taught or Suggested

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

(7) Thus, based on *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) and MPEP 2143.03, 2141, 706.02(j) [see the above citations], the O.A. fails to establish *prima facie* obviousness of a claimed invention.

(8) Applicant respectfully submits that the rejections on the proposed combination of Harding and Yamamura are improper and should be withdrawn.

III.6. All claim limitations must be taught or suggested by the prior art as required by the court decision *In re Royka*, , 490 F.2d 981, 180 USPQ 580 (CCPA 1974), and MPEP 2143.03. The fact is that the all claimed key limitations of claims 21-22 and 24-25 are neither taught nor suggested by the prior art including Harding and Yamamura. Thus, the O.A. fails to comply with the court decisions and MPEP 2143.03, 2141 and 706.02(j). MPEP 706.02(j) states “... .. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.

· Cir. 1991)”

MPEP 2141 BASIC CONSIDERATIONS WHICH APPLY TO OBVIOUSNESS REJECTIONS also states the above citation. “... To establish a *prima facie* case of obviousness, three basic criteria must be met. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitation”.

III.7. The proposed combination changes the reference operation principles as pointed out below. Thus, the O.A. fails to follow MPEP2143.01 and the court decision.

(1) Harding’s operation principle is that “feeding an optical fibre preform into a furnace at a first predetermined rate, pulling a fibre from the preform around the capstan at a second predetermined rate, said first and second predetermined rates being calculated to produce a fibre of a predetermined nominal diameter, sensing the diameter of the drawn optical fibre and providing a signal representative of a deviation of the measured diameter from the nominal diameter, and modifying the speed of the capstan in response to the deviation signal from the diameter monitor, whereby to tend to maintain the optical fibre as close as possible to the nominal preset diameter, and controlling the glass melting rate by varying the preform feed drive rate to maintain an average fibre pulling rate close to the second predetermined rate.” [col.1, lines 34-48]

The proposed modification or combination changes Harding’s operation principle of no preform diameter measurement and no preform deviation calculation for his preform feeding speed control and fiber drawing speed control.

(2) In other scope and content, Yamamura teaches outer diameter measurements above and below the heating, but both **in the furnace, not for its final product glass ingot or at best preform for optical fiber, because its final product – preform – is out of the furnace with inevitable size change. Yamamura’s operation principle for manufacturing his final product glass ingot or at best preform is that measurement 6a in the furnace above the heating controls the furnace temperature distribution within the heating furnace when a variation of a measurement of the outer diameter measuring device 6a exceeds a preset value** [col.2, L.64-67, col.3, L.1-3]. **The measurement 6b in the furnace below the heating is for a relative glass ingot stretch control** [col.2, L.55-59].

- (3) Of course, **Yamamura** does NOT teach the measurement for the fiber drawing process;
- (4) **Claims 21-22 and 24-25 claim the fiber drawing speed and the preform feeding speed controlled by “the perform deviation and the fiber diameter deviation” and “the preform measurement, the fiber measurement, the predetermined preform value and the predetermined fiber value”.**
- (5) **Harding’s control system does not adjust its preform feeding speed based on the perform deviation, the preform measurement, and the predetermined preform value.**
- (6) **Harding’s preform feeding speed is set to a particular rate and is slowly adjusted to maintain long term of the preform feed drive if the measured capstan speed [fiber drawing speed] is at a stable speed slightly different from a pre-calculated speed.**
- Especially, the fact and evidence is from Harding’s conclusion that “it is important not to deviate by more than $\pm 5\%$ of the preset values” [see col.3, L.7-13].**
- (7) **Because the operation scopes and operation principles are different between Harding and Yamamura, the proposed modification or combination is changing the operation principle of the primary reference.**
- (8) **Because the operation principles of the references (and the operation scope of Yamamura) are clearly different from the claimed present invention, the proposed modification or combination is changing the both operation principles of the references. That change of the operation principles of the references for the rejection is impermissible as MPEP 2143.01 states.**

(9) MPEP 2143.01 THE PROPOSED MODIFICATION CANNOT CHANGE THE PRINCIPLE OF OPERATION OF A REFERENCE

If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)

The court reversed the rejection holding the “suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well

as a change in the basic principle under which the [primary reference] construction was designed to operate.” 270 F.2d at 813, 123 USPQ at 352.

(10) Thus, the O.A. fails to comply with MPEP 2143.01 and the court decisions.

(11) Applicant respectfully submits that the rejection on Harding and Yamamura to Claim 21-22 and 24-25 should be withdrawn.

III.8. From the above facts, it is clear that Harding and Yamamura obviously teach away from the claims of the present invention. However, the O.A. fails to notice that prior art disclosures teach away from themselves, from their combination, and from the claims. Thus, the O.A. fails to follow MPEP 2141.02 and the court decision.

(1) Harding and Yamamura (even in other scope) obviously teach away from the applicant’s claimed present invention in the ways what to be measured, where to do measuring, how to use the measurement data, what to be controlled, and how to control, especially the control operation principle, as claimed in claims 21-22 and 24-25.

(2) Because of the evidence that Harding and Yamamura teach away from the claimed invention as listed above, the O.A. fails to follow MPEP 2141.02 and 2145 X.D.2.

MPEP 2141.02: PRIOR ART MUST BE CONSIDERED IN ITS ENTIRETY, INCLUDING DISCLOSURES THAT TEACH AWAY FROM THE CLAIMS

A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984)

(3) MPEP 2145 X.D.2 states: References Cannot Be Combined Where Reference Teaches Away from Their Combination

It is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983).

Thus, the proposed combination of Harding and Yamamura is not proper because they teach away from their combination.

(4) Based on MPEP 2141.02, 2145 X.D.2, the court decisions, and the fact of references

teaching away from the claims and from their combination, it is clear that Claims 21-22 and 24-25 are unobvious and patentable over Harding and Yamamura.

(5) It is clear that the ordinary skill is taught away from the claimed invention. The claimed invention is unobvious over the prior art.

(6) Because the reference teaches away, the O.A. fails to “present a convincing line of reasoning as to why the ordinary skill would have found the claimed invention to have been obvious in light of the teachings of the references” as required in *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985) by the MPEP 706.02(j).

III.9. Moreover, the proposed combination or modification of Harding in view of Yamamura does not meet all three basic criteria as required by MPEP 2142 and the basic consideration as required by MPEP 2141, in view of the above mentioned facts.

MPEP 2142 ESTABLISHING A PRIMA FACIE CASE OF OBVIOUSNESS

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). [emphasis added]

MPEP 2141 BASIC CONSIDERATIONS WHICH APPLY TO OBVIOUSNESS REJECTIONS

When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to:

- (A) The claimed invention must be considered as a whole;
- (B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;
- (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and
- (D) Reasonable expectation of success is the standard with which obviousness is determined.

Hodosh v. Block Drug Co., Inc., 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).
[emphasis added]

As pointed out, there is no suggestion or motivation to modify or combine the references teachings in the references themselves or in the knowledge generally available to one of ordinary skill in the art.

Second, the O.A. proposed combination will not have a reasonable expectation of success because the combination is inoperable and destroys both processes.

Third, when combined, the resultant references teachings still do not teach or suggest all the claim limitations, such as listed in section III.5 above.

Thus, the O.A. fails to establish a *prima facie* case of obviousness because the O.A. fails to meet three basic criteria that must be met as MPEP 2142 and the decision state.

III.10. The O.A. fails to establish a *prima facie* case of obviousness because the proposed combination has no motivation, the combination is inoperable and destroys the both references processes, the combination has no expectation of success, the combination still omits the applicant's claimed key steps, the references teach away from the combination, the references teach away from the claims, the proposed modification or combination of the references changes the operation principle of the reference, and the prior art does not teach or suggest all claim limitations, as listed above.

Thus, the O.A. fails to follow MPEP 706.02(j), 2141, 2141.02, 2142, 2143, 2143.01, 2143.03, 2145 X.D.2, and the court decisions, as cited above.

Thus, Applicant respectfully submits that the rejection to Claims 21-22 and 24-25 should be withdrawn.

III.11. In view of the above III.1 – III.10, the O.A. item 15 is in error.

The rejection of item 15 based on Harding and Yamamura to Claims 21-22 and 24-25 is in error and should be withdrawn.

III.12. The O.A. item 19 is in serious error because it distorts Applicant's Replies and statement, lacks the supporting fact and ground, and wrongly cites BPAI decision. This serious error is clearly impermissible. The O.A. fails to follow MPEP 2145II, 707.07(f) [7.37.07] instructions. Thus, the rejection is improper and should be withdrawn.

(1) The O.A. item 19 [p.5] is in error by missing a full citation of the BPAI decision and lacking the fact support, as pointed out as follows.

Item 19 states: “Note that even though the combination of Harding with Yamamura et al is motivated by the use of preform diameter for temperature control instead of for feeding and drawing speed control, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd Pat. App. & Inter. 1985).” [The underlines are added to point out the serious error in the O.A., i.e., distorting the Applicant’s application and/or Replies.]

For a clear comparison and a correct judgment, the BPAI citation recites from **MPEP 2145II** as follows:

“ ‘The fact that appellant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious.’ *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985) (The prior art taught combustion fluid analyzers which used labyrinth heaters to maintain the samples at a uniform temperature. Although appellant showed an unexpectedly shorter response time was obtained when a labyrinth heater was employed, the Board held this advantage would flow naturally from following the suggestion of the prior art.).”

From the above case citation, the base is clear that the prior art and the application in the case both have the same feature step or part (labyrinth heater), then an unexpected advantage that would flow naturally from following the suggestion of the prior art, i.e., from using the same feature step or part (labyrinth heater), cannot be the basis for patentability.

(2) The O.A. item 19 fails to comply with the instruction in MPEP 707.07(f) ¶ 7.37.07.

The instruction to use that citation is as follows:

MPEP 707.07(f) ¶ 7.37.07 Unpersuasive Argument: Applicant Obtains Result Not Contemplated by Prior Art is as follows:

“In response to applicant's argument that [1], the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Examiner Note

1. In bracket 1, briefly restate applicant's arguments with respect to the issue of results not contemplated by

the prior art.

2. This form paragraph must be preceded by form paragraph 7.37. [emphasis added]

¶ 7.37 Arguments Are Not Persuasive

Applicant's arguments filed [1] have been fully considered but they are not persuasive. [2]

Examiner Note

1. The examiner must address all arguments which have not already been responded to in the statement of the rejection.

2. In bracket 2, provide explanation as to non-persuasiveness. [emphasis added]

The above MPEP instructions to Examiner are very clear that in bracket 1 it should be applicant's arguments, but it should not be the Examiner's making argument.

This 7.37.07 "form paragraph **must** be preceded by form paragraph 7.37".

However, the O.A. has no preceding form paragraph 7.37, and has no any address to all arguments which Applicant presented in his previous Replies regarding references including Harding, Yamamura, Yoshimura, Urruti, Kohei and others.

Furthermore, the O.A. item 19 wrongly used the form paragraph 7.37.07 as pointed further below. Thus, the O.A. clearly violates MPEP 707.07(f) [7.37.07].

(3) It is clear that the O.A. is in serious error because of the following facts, grounds and reasons:

- i. **There is no motivation to combine Harding and Yamamura, or Yoshimura and Yamamura, or Urruti and Yamamura, or other fiber drawing process reference and Yamamura, as Applicant states in all his Replies.**
- ii. **Thus the O.A. violates MPEP 707.07(f) [7.37.07] because Applicant's point is that there is NO MOTIVATION for the Examiner's proposed combination.**
- iii. **The O.A. item 19 wrongly inserts Examiner's making arguments in "block [1]" position, thus fails to comply with MPEP 707.07(f) [7.37.07].**
- iv. **The O.A. further distorts the fact of Applicant's statements and arguments by wrongly states "the fact that applicant has recognized".**

The O.A. statement in item 19, "the fact that applicant has recognized another advantage

which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious”, is totally in serious error, because the fact is that applicant never recognizes that.

Applicant would like to ask the Examiner where and when Applicant has recognized that.

- v. **There is no fact to claim “the fact that applicant has recognized ...” as claimed in item 19 of the O.A. The O.A. distorts the fact!**
- vi. **There is no suggestion in the prior art to do the claimed present invention.**
- vii. **Where is the suggestion of the prior art to do the claimed present invention?**

The O.A. of 6-6-2005 [p.17, L.17-18] has already recognized that “Examiner completely understands this – no rejection indicates the motivation comes from the references themselves.”
- viii. **How would another advantage flow naturally from non-existed suggestion of the prior art?**
- ix. **How would the claimed distinguished feature steps or parts flow naturally from non-existed suggestion of the prior art?**
- x. **The prior art lacks the claimed key feature steps. There is no claimed distinguished key feature step following the suggestion of the prior art. What is the ground for the O.A. citing *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd Pat. App. & Inter. 1985) here?**
- xi. **The O.A. fails to point out what the O.A. stated “advantage” is. How can it naturally flow from following the suggestion of the prior art? Who recognizes it?**
- xii. **The O.A. fails to provide any fact to show that any suggestion of the prior art for the O.A. “recognized another advantage”.**

- (4) The O.A. is against fact by wrongly stating “the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art”. There is no any citation (e.g., page number, sentence, or others) to support the statement in item 19 of the O.A.**

- (5) The fact is the control principle and key steps as claimed in Claim 21 is totally different and unobvious from prior art:**

Claim 21 recites: “measuring either the outer diameter or shape of a preform; ...

providing a control system with the measured outer diameter or shape of said preform, the measured outer diameter of said optical fiber, a predetermined preform value and a predetermined fiber value for controlling said drawing process;

calculating a preform deviation of the measured preform diameter or shape from the predetermined preform value, and a fiber diameter deviation of the measured fiber diameter from the predetermined fiber value;

wherein the control system generates control signals based on the preform deviation and the fiber diameter deviation for controlling

the feeding speed of said preform and the drawing speed of said optical fiber; ...”. [emphasis added]

- (6) Thus, item 19 is in error, against the fact, and lack of grounds. It is improper to wrongly state “applicant has recognized ... from following the suggestion of the prior art ...”, because Applicant never recognizes that. It distorts the present invention and Applicant’s viewpoints. Applicant always states that the present invention is unobvious over and patentably differs from the prior art including Harding and Yamamura.**

- (7) The O.A. fails to follow MPEP 2143.01 because its item 19 changes the principle of operation of Harding or Yamamura.**

MPEP 2143.01 THE PROPOSED MODIFICATION CANNOT CHANGE THE PRINCIPLE OF OPERATION OF A REFERENCE

If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)

The court reversed the rejection holding the “suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate.” 270 F.2d at 813, 123 USPQ at 352.

- (8) As pointed out above, the O.A. item 19 lacks the supporting fact and ground, and wrongly cites that *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd Pat. App. & Inter. 1985). The**

O.A. item 19 is in serious error and fails to comply with MPEP 2143.01, 706.02(j), 2145II, 707.07(f) – 7.37.07.

- (9) Thus, Applicant respectfully submits that the rejection on Claims 21-22 and 24-25 is improper and should be withdrawn.**

III.13. Item 17 of the O.A. fails to notice that “the long term and short term control discussed by col. 3, lines 13-20 of Harding” [O.A. p.5, line 2] lacks “robustly controlled against deviations of the preform outer diameter or shape at different locations and against deviations of various performs” as claimed in Claim 21, because Harding’s process lacks the claimed key steps of Claim 21 as recited above. The key is that these claimed steps patentably differ from the prior art. The O.A. is in error by cutting piece words “robustly controlled” out from claim 21, and fails to read the claim as a whole and the reference as a whole. Thus, the O.A. fails to follow MPEP 2141 and the court decision.

- (1) Harding’s col.3, lines 13-20 recites: “Thus the control algorithm 21 functions to maintain long term control of the preform feed drive and will thus, in the situation described, attempt to increase slowly the preform feed rate to match the measured capstan speed. The capstan speed will still be subject to short-term adjustment by the diameter monitor 9 should that sense any deviation from the preset diameter.” [emphasis added]**
- (2) The claimed robustness against deviations of the preform outer diameter or shape at different locations and against deviations of various performs is lacked by the prior art including Harding, because the prior art lacks measuring preform, calculating the preform deviation, and controlling the preform feeding speed and the fiber drawing speed based on the calculated preform deviation and the calculated fiber diameter deviation.**
- (3) The key is that Harding’s process omits the steps of: measuring the preform in the process, providing the preform measurement to the control system, calculating the preform deviation, and controlling the preform feeding speed and the fiber drawing speed based on the preform deviation, the fiber diameter deviation, the preform measurement, and the predetermined preform value, as claimed in Claims 21-22 and 24-25.**

- (4) Thus, the O.A. fails to follow MPEP 2141 and 2141.02 because the claimed “robustly control” as a whole should read “whereby said optical fiber drawing process is robustly controlled against deviations of the preform outer diameter or shape at different locations and against deviations of various preforms”, that is lacked in the Harding’s teaching or suggestion.

MPEP 2141 BASIC CONSIDERATIONS WHICH APPLY TO OBVIOUSNESS REJECTIONS

When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to:

- (A) The claimed invention must be considered as a whole;
- (B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;
- (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and
- (D) Reasonable expectation of success is the standard with which obviousness is determined.

Hodosh v. Block Drug Co., Inc., 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

MPEP 2141.02: PRIOR ART MUST BE CONSIDERED IN ITS ENTIRETY, INCLUDING DISCLOSURES THAT TEACH AWAY FROM THE CLAIMS

A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984)

III.14. Item 18 of the O.A. [p. 5] is in error and fails to follow MPEP as pointed out below.

- (1) Item 18 states: “Yamamura et al taught methods of drawing glass performs wherein the diameter of the preform was measured before it was heated and drawn (see col. 2, lines 40 to col. 3, line 14 as well as the abstract, claims and figures). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to measure preform diameter before heating and drawing in the method of Harding because Yamamura et al taught that it would have enabled individual heater control and obviate the need for subsequent diameter correction (see col. 1, line 54 to col. 2, line 2)” [O.A. p.5, L.3-9]. [underlines added]

(2) The fact is as follows:

- Yamamura *et. al.* process is for drawing a glass ingot or at best a preform for an optical fiber (see col. 1, lines 5-10);
- the preform for an optical fiber is the final product of Yamamura’s process; and
- Yamamura’s process does not measure the diameter of the preform for an optical

fiber before it was heated and drawn because the preform for an optical fiber is his process product which is after the heating and drawing (see col. 1, line 54 to col. 2, line 2; col. 2, lines 40 to col. 3, line 14; abstract, claims and figures).

Thus, item 18 is in error.

(3) Furthermore, it is important to notice the fact that the O.A. item 18 recognizes no motivation to invent present invention as claimed in Claims 21-22 and 24-25 because item 18 states “because Yamamura et al taught that it would have enabled individual heater control and obviate the need for subsequent diameter correction (see col. 1, line 54 to col. 2, line 2)” [O.A. p.5, L.8-9]. [emphasis added]

(4) As above pointed out, the control principle of the claimed invention in Claim 21 patentably differs from Harding and all other prior art, even Yamamura in a different scope and without motivation for proposed combination.

(5) Based on the above O.A. statement, Harding’s process would not need any modification, because of no “need for subsequent diameter correction” to Yamamura’s product preform, thus Harding’s process would just use the preform manufactured by a separate Yamamura process.

(6) Because there is no motivation to modifying or combining Harding and Yamamura, how would it have been obvious “to measure preform diameter before heating and drawing in the method of Harding”?

Therefore, item 18 is further in error by stating “It would have been obvious ... to measure preform diameter before heating and drawing in the method of Harding ... because Yamamura et al taught that it would have enabled individual heater control and obviate the need for subsequent diameter correction”.

(7) Therefore, the O.A. fails to follow MPEP 2141, 706.02(j) and 2142 because there is no motivation for proposed combination or modification as pointed out by the facts in III.2 and in view of the O.A. statement in item 18.

(8) Applicant respectfully submits that the rejection of items 15 and 18 is improper and should be withdrawn.

III.15. Item 20 of the O.A. [p.5] fails to provide any fact and grounds to support its statement on obviousness. Item 20 is in error because Harding and Yamamura did not teach or suggest an optical fiber measurement location where the diameter has stabilized.

Item 20 states: "Harding did not teach that the optical fiber measurement was to take place at a position where shrinkage of the fiber was not larger than a predetermined allowable diameter deviation. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to measure the fiber diameter as claimed because a person of skill in the art would have been motivated to choose a measurement location where the diameter had stabilized."

MPEP 2142 ESTABLISHING A PRIMA FACIE CASE OF OBVIOUSNESS

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). [emphasis added]

The most important facts are that

- **there is no motivation to combine Harding and Yamamura,**
- **the proposed combination is inoperable,**
- **even as modified or combined, the resultant teachings still omit one or more of applicant's claimed features as recited in III.5, especially,**
 - **the measurement of the preform, and**
 - **the novel control operation principle: the drawing speed control and the feeding speed control based on the calculated deviation of the measured preform and the calculated deviation of the measured fiber in claim 21, and further the preform measurement and the predetermined preform value in claims 22 and 24-25.**

III.16. Dependent claims 22 and 24-25 incorporate all the subject matter of claim 21 and add additional subject matter which makes them a fortiori and independently patentable over the prior art including Harding and Yamamura.

MPEP 2143.03 All Claim Limitations Must Be Taught or Suggested

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). ...If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). [emphasis added]

Claim 22 recites: “measurement of said preform outer diameter or shape is on-line by a measurement monitor device;

the measured diameter or shape is on-line real-time fed to said control system; and

said control signals are further based on the measured preform diameter or shape, and said predetermined preform value,”

Claim 24 recites: “the control signals are further based on the preform measurement, the fiber measurement, the predetermined preform value and the predetermined fiber value, for”.

Claim 25 recites: “the position of measuring the optical fiber is at a position at which shrinkage of the outer diameter of said optical fiber is not larger than a predetermined allowable diameter deviation value of said optical fiber”.

Thus, based on the above cited Law, court decisions, MPEP, facts and evidences listed above for nonobviousness, applicant respectfully submits that the rejection on Harding and Yamamura to claims 22, and 24-25 is improper and should be withdrawn.

III.17. Therefore, based on the above objective facts and evidences, the cited Law, court decisions and the Office policy MPEP, Applicant respectfully submits that the rejections on the references are improper and should be withdrawn. Claims 21-22 and 24-25 are patentable over the prior art.

IV. Response and Rebuttal to the Claim Rejections (35 USC §103).

Claim 26 Is Unobvious and Patentable Over Harding (4793840) and Kohei (JP 06-206734) as well as Saito (6438997).

IV.1. The O.A. items 21 and 23-24 [p.6] are in error because the O.A. grounds for rejection on Harding and Kohei (or Saito) are in error, and the O.A. fails to comply with the Law, decisions and MPEP, especially MPEP 706.02(j), 2141, 2141.02, 2142, 2143.01, 2143.03, 2145X.D.2, and the court decisions wherein.

The key facts, grounds and reasons are as follows.

- **It is improper to use the incorrect translation of JP patent in the O.A. for a decision or action. Please see the Notice in the translation document cited by the first examiner in the file, and the O.A. item 21.**
- **The proposed combination of Harding and Kohei or Saito lacks motivation because there is no any teaching or suggestion in the references, or in any generally available knowledge for the ordinary skills to do the proposed combination. [MPEP 2141, 706.02(j), 2142, the court decisions]**
- **The motivation for combining or modifying features of the references is as being based on hindsight from the present invention. [MPEP 2141(C)]**
- **The O.A. viewed the references with the benefit of impermissible hindsight vision afforded by the claimed invention because the fact is that a series of the issued patents lack the claimed control principle and key steps. [MPEP 2141(C)]**
- **The new cited reference Saito (6438997 Sumitomo Elec. Ind. Ltd.) is in a different field as stated by Saito: “Field of Invention – The present invention relates to a method of elongating a glass preform for optical fiber”. If the proposed Harding in view of Sumitomo is for a combination of Harding and Saito, the fact is that the combination of Harding and Saito is inoperable by the facts similar to those described in the above III.4. [MPEP 2142, 2143.01, 2145III, wherein the court decisions]**
- **Even as proposed combination or modification, the proposed combination of Harding and Kohei or Saito still omits the applicant’s claimed key steps. [MPEP**

2141, 706.02(j), wherein the court decisions]

- **The O.A. fails to show that all claim limitations must be taught or suggested by the prior art. [MPEP 2143.03, 2141, 706.02(j), wherein the court decisions]**
- **The proposed combination or modification changes the reference operation principles, that is impermissible. [MPEP 2143.01, wherein the court decision]**
- **The references teach away from the claimed present invention in view of different methods and operation principles. [MPEP 2141.02, 2145X.D.2, the court decisions]**
- **The O.A. fails to establish a prima facie case of obviousness because the proposed combination has no motivation, omits the claimed key steps, and changes the control operation principle of the primary reference and the control operation principles the references, and because the references teaching away from the claimed invention. The O.A. fails to follow the court decisions and MPEP as mentioned above and below. [MPEP 706.02(j), 2141, 2142, wherein the court decisions]**
- **Item 21 of the O.A. is in error because it is improper to use the incorrect translation (in the file cited by the previous Examiner in 6-6-2005 O.A.) for the decision or action, and fails to follow the court decisions and MPEP as pointed out below.**
- **Items 23-24 of the O.A. are in error because (i) Harding's process lacks "whereby to robustly control said optical fiber drawing process by the double measurements of the bare fiber diameters from said measurement devices", (ii) the O.A. distorts Kohei's goal and method (Sumitomo Ele. Ind. Ltd.), (iii) the O.A. fails to provide facts and grounds, and (iv) the O.A. fails to follow the law, court decisions and MPEP as pointed out below.**
- **Thus, the O.A. rejection lacks reasonable grounds, and is in error or mistake, and does not follow the 35 USC 103, court decisions and MPEP policy 706.02(j), 2141, 2141.02, 2142, 2143.01, 2143.03, 2145III, as pointed out below in detail.**

IV.2. Items 21 and 24 of the O.A. are in error because it is improper to use the known incorrect translation cited by the previous Examiner in the 6-6-2005 O.A. in the file for the decision or action.

- (1) Item 21 of the O.A. [p.6] states: "Claim 26 is rejected under 35 U.S.C. 103(a) as being**

unpatentable over Harding in view of Sumimoto (JP 06-206734 using the English language abstract and the translation already of record in the file)".

- (2) First, the above item 21 has a minor typographical error. The "Sumimoto" should read "Sumitomo", for Sumitomo Electric Ind. Ltd.
- (3) Second, Applicant guesses that the O.A. implies Kohei (JP 06-206734), not the new citing reference Saito (US 6438997), because the O.A. says JP 06-206734.
- (4) Third, it is important to point out that "the English language abstract and the translation" of Kohei "already of record in the file" translated from Japanese and cited by the 6-6-2005 O.A. in the file is Not Correct.

Please see the following official Notice in that Translation from that file:

*** NOTICES ***

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

Thus, it is not proper to cite or use that incorrect translation for decision or action.

- (5) Please refer to the 9-6-2005 Reply [pp.106-107] or 12-5-2005 Reply [pp.73-74], where Applicant has provided a correct translation on Kohei's col.2, 0007 [Means for Solving the Subject], the most important part of Kohei's invention method.
- (6) Now, Applicant attaches a correct translation of the whole Kohei's JP Patent to this Reply.
- (7) The above Official Notice is an objective evidence to show that the O.A. is in error to make rejection based on a clearly known incorrect translation document.

Thus, Applicant respectfully submits that the rejection to Claim 26 is improper and should be withdrawn.

IV.3. There is no motivation to make the O.A. proposed combination or modification of Harding and Kohei or Saito because there is no any teaching or suggestion in the references or generally available knowledge for the ordinary skills to make this proposed combination or modification.

Therefore, the rejection is as being based on hindsight from the present invention.

- (1) The fact and evidence is clearly that Harding and Kohei or Saito do not teach or suggest for the proposed combination or modification, and there is no generally available knowledge for ordinary skills to do the proposed combination or modification.**
- (2) The O.A. fails to show objective evidence of teaching or suggestion in the references, or generally available knowledge to an ordinary skill for the proposed combination or modification.**
- (3) The O.A. fails to show what the examiner's suggested combined process is or looks like from the references teaching or suggestion or generally available knowledge.**
- (4) The suggestion to combine the references should not come from applicant was forcefully stated in Orthopedic Equipment Co. v United States, 217 USPQ 193, 199 (CAFC 1983):**

“It is wrong to use the patent in suit [here the patent application] as a guide through the maze of prior art references, combining the right references in the right way to achieve the result of the claims in suit [here the claims pending]. Monday morning quarterbacking is quite improper when resolving the question of nonobviousness in a court of law [here the PTO].”

Applicant would further cite the following. As was further stated in Uniroval, Inc. v. Rudkin-Wiley Corp., 5 USPQ2d 1434 (CAFC 1988),

“[w]here prior-art references require selective combination by the court to render obvious a subsequent invention, *there must be some reason for the combination other than the hindsight gleaned from the invention itself. ... Something in the prior art must suggest the desirability and thus the obviousness of making the combination.*” [emphasis added]

- (5) Another fact is that the O.A. of 2005-6-6 [p.17, L.17-18] clearly recognizes that “Examiner completely understands this – no rejection indicates the motivation comes**

from the references themselves.” Furthermore, that O.A. states “Presently, one of ordinary skill would combine the relevant teachings to obtain ‘dramatic improvement’ and a significantly more robust process” [p.17, L.18-20]. [emphasis added]

Here, a key word is “Presently” that the O.A. of 2005-6-6 states and recognizes.

This is objective evidence that the motivation for combining or modifying features of the references is as being based on hindsight from the present invention which applicant submitted in 2000.

- (6) The fact is that the O.A. fails to show the motivation for the proposed combination or modification.**

The fact is that there is no motivation as above pointed out.

- (7) Furthermore, in view of the fact of issuing a series of patents of Harding, Yoshimura, Urruti, Kohei, Saito, Yamamura, and others, an objective evidence and a clear fact is that these experts and inventors have no motivation, no teachings or suggestions for the O.A. proposed combination or modification for more than a decade. These respectable experts and inventors have no motivation for the O.A. proposed combination or modification. Then, how would an ordinary skill be motivated to do the O.A. proposed combination or modification?**

- (8) Thus, the O.A. fails to comply with MPEP 706.02(j), 2141, 2142 and the cited court decisions. Please see the text of these MPEP policy and court decisions in the above section III.2 items (11), (12) and (13).**

- (9) Thus, Applicant respectfully submits that the rejection based on combination or modification of Harding and Kohei or Saito should be withdrawn.**

IV.4. Because of no motivation, the proposed combination or modification of Harding and Kohei or Saito is based on hindsight, that is Not permitted by the Office policy – MPEP 2141 BASIC CONSIDERATIONS WHICH APPLY TO OBVIOUSNESS REJECTIONS
(C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention.

IV.5. As pointed out above, the fact is that the combination of Harding and Saito is inoperable because inevitable situations will cause conflict control commands for the preform movement from the Harding's control command and the Saito's control command. Please refer to the similar detail analysis in the above section III.4. Therefore, the combination of Harding and Saito will destroy the both processes and the resultant combined process, i.e., that is inoperable. Thus, there is certainly No any motivation for a combination of Harding and Saito.

IV.6. Even as proposed combination or modification of Harding and Kohei or Saito, the resultant teaching still omits one or more of the applicant's claimed key steps and control operation principle as recited below. Thus, the O.A. fails to follow MPEP 2141 and 706.02(j), and the court decisions.

(1) Claim 26 recites:

"... ... measuring the outer diameters of said optical fiber, when that is bare, at two or more different locations by respective measurement devices,

wherein a first location is close to the furnace, and

a second location is below the first location, at this second location shrinkage of the outer diameter of said optical fiber, while stretched under the drawing, is not larger than a predetermined allowable bare fiber diameter deviation value of said optical fiber, or immediately before coating;

coating said optical fiber;

providing a control system with the measurement data from said measurement devices respectively at the different locations,

wherein said control system

has a first preselected value for the measurement data from the first measurement location, and a second different preselected value that is less than the first preselected value for the measurement data from the second measurement location,

calculates the deviation of the measurement of the first measurement location from the first preselected value, and the deviation of the measurement of the second measurement location from the second preselected value, and

controls a fiber drawing speed and a preform feeding speed for the drawing process based

on the calculated deviations;

whereby to robustly control said optical fiber drawing process by the double measurements of the bare fiber diameters from said measurement devices.” [emphasis added]

- (2) The O.A. fails to ascertain the differences between Kohei’s process means [0007] and Claim 26 in issue, as required by MPEP Office policy to follow *Graham v. John Deere Co.* in the consideration of obviousness under 35 U.S.C. 103.
- (3) The O.A. fails to recognize the fact and objective evidence that Kohei’s process lacks the claimed key steps, and especially, the claimed operation control principle in Claim 26 as recited above, when the O.A. proposed a combination of Harding and Kohei (JP 06-206734) in its items 21 and 24.
- (4) It is clear that Harding and Kohei, as well as Yoshimura and Urruti, or Yamamura and Saito [the latter two do not teach the fiber drawing process], all do not teach or suggest the above recited steps and control operation principle, especially those with underlines. **The prior art all never teach or suggest Double measurements on the bare fiber. Their process control operation principles are NOT based on the calculated first bare fiber diameter deviation AND the calculated second bare fiber diameter deviation from preselected diameter values as claimed.**
- (5) Even as proposed combination of Harding and Kohei, or Harding and Saito, the combined resultant teachings still omit the above recited key distinguished and patentable steps and novel control operation principle as claimed in Claim 26.
- (6) Thus, the O.A. fails to follow MPEP 2141, 706.02(j) and the court decisions.

MPEP 2141 BASIC CONSIDERATIONS WHICH APPLY TO OBVIOUSNESS REJECTIONS

“To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. **Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant’s disclosure. *In re Vaeck*, 947 F.2d

488, 20 USPQ2d 1438 (Fed. Cir. 1991). [emphasis added]

[Please see the citations in the above section III.2 items (11) and (12) as well.]

IV.7. The O.A. fails to show that all claim limitations must be taught or suggested by the prior art, thus fails to follow MPEP 2143.03, 2141, 706.02(j), and the court decisions. (Please see the citations in the above III.2 (11), (12), III.5 (5), and III.16.)

“To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art” as required by the court decision *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974), and by MPEP 2143.03.

The claimed limitations of claim 26 are neither taught nor suggested by the prior art including Harding, Kohei, Yoshimura and Urruti, or Saito. Thus, the O.A. fails to comply with the court decisions and MPEP 2143.03, 2141 and 706.02(j).

IV.8. The proposed combination or modification changes the reference operation principles, that is impermissible. Thus, the O.A. fails to follow the court decision and MPEP 2143.01 and MPEP 2145III.

(1) MPEP 2143.01 THE PROPOSED MODIFICATION CANNOT CHANGE THE PRINCIPLE OF OPERATION OF A REFERENCE

If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)

The court reversed the rejection holding the “suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate.” 270 F.2d at 813, 123 USPQ at 352.

(2) MPEP 2145 III: “... .. However, the claimed combination cannot change the principle of operation of the primary reference or render the reference inoperable for its intended purpose. See MPEP §2143.01.”

(3) The prior art never teaches or suggests Double measurements on the bare fiber.

Their process control operation principles are NOT based on the calculated first bare fiber diameter deviation AND the calculated second bare fiber diameter deviation from preselected diameter values as claimed in Claim 26.

Harding's process control utilizes bare fiber measurement from only "a fibre diameter monitor (9)" for his control [abstract, Figure, col.2, lines 14-15].

Kohei's process control operation principle [0007] uses its bare fiber measurement from EITHER device 21 at the beginning period time before the drawing speed reaches a predetermined speed, OR device 14 at the time after the drawing speed reaches a predetermined speed [abstract, claims, 0007, 0011-0015], by his **switch** [0007, claim 1]. Thus, his process control uses only one bare fiber diameter measurement at any particular period time, but not both at any period time. His control operation principle Never uses both device 21 AND device 14 at any particular time or any particular time period because they are used at different and separate time periods.

From Kohei's fig.1 and teaching [0007, 0012-0015], it can be seen that Kohei's process is close to Yoshimura's fig.3 and teaching [col. 2, L.64-68]. Yoshimura's is for different fiber drawing speed processes, but Kohei's is for different time periods of a fiber drawing process.

Saito's process control is for elongating a glass preform for optical fiber, not for drawing an optical fiber. His preform manufacturing process control uses only one preform diameter measurement (R2) from his only measurement device 5 at a specific position 1d [abstract, claims, col.2, lines 41-60, col.5, lines 59-63]. His R2 is the measurement while R1 is not the measurement, but a diameter reference value. His control feature principle is to use R2/R1 [Fig.1, col.2, lines 41-67; col.3, lines 1-67].

(4) The fact is clear that Kohei's method teaching as whole is as follows.

During the period of the fiber drawing speed increase, at the time before the drawing speed of the optical fiber 13 reaches a predetermined drawing speed (e.g., 100m/min), this second outer-diameter measurement device 21 is used to measure the outer diameter of the optical fiber 13. When the fiber drawing speed reaches the predetermined speed (e.g., 100 m/min above), the first outer-diameter measurement device 14 is used for measurement as same as

usual. Thus, in the drawing beginning period of the drawing speed rising and at the stable period of the drawing speed, the different outer-diameter measurement devices with different measurement sights and measurement precisions are used respectively by switch. [0007, 0011 – 0015, abstract, claims]

- (5) Then, how would the proposed combination or modification of Harding and Kohei or even Saito have the claimed control operation principle in Claim 26?**
- (6) Also, please notice the fact that the combination of Harding and Saito is inoperable. Thus, there is certainly No any motivation for a combination of Harding and Saito.**
- (7) The above facts clearly show that the O.A. changes the principle of operation of reference Harding or Kohei or even Saito (in a different scope).**
- (8) Thus, the O.A. fails to follow the court decisions and MPEP 2141.01 and 2145 III.**

IV.9. From the facts in the above IV.5 and IV.7, it is very clear that Harding and Kohei, as well as Saito, teach away from the claimed present invention in view of different methods and different control operation principles. Thus, the O.A. fails to follow MPEP 2141.02 and the court decision.

MPEP 2141.02: PRIOR ART MUST BE CONSIDERED IN ITS ENTIRETY, INCLUDING DISCLOSURES THAT TEACH AWAY FROM THE CLAIMS

A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984)

IV.10. The O.A. fails to establish a prima facie case of obviousness because the proposed combination of Harding and Kohei (or Harding and Saito) omits the claimed key steps, changes the control operation principle of the primary reference and the control operation principles the references, because the references teach away from the claimed invention, and because the O.A. fails to follow the court decisions and MPEP 706.02(j), 2141, 2141.02, 2142, 2143.01, 2143.03, 2145III, and the court decisions, as cited above. [Please see the citations in above IV.4, IV.6 – IV.9 and III.15.]

IV.11. However, Examiner Mr. Chin is reasonable and recognizes that “double outer diameter measurement of the bare fiber” patentably differs from prior art during the interview of 3-11-2005.

When the Examiner Mr. John Hoffmann was ill on the scheduled interview day 3-11-2005, the SPE was out of office on that day, and Applicant had arrived at the USPTO at that time, with the USPTO front desk peoples' assistance, Applicant was interviewed by the Examiner Mr. Peter Chin at the USPTO in Alexandria, VA, on that day.

Examiner Chin looked at Applicant's presented summary diagrams of the present invention and references, and a comparison table. He uses the word “double” into the summary [Interview Summary of 3-11-2005, p.1], after Applicant described the present invention and key features and differences from prior art. Examiner Chin is reasonable and recognizes that “double outer diameter measurement of the bare fiber” patentably differs from prior art.

IV.12. Furthermore, the SPE reasonably agreed with the claims amendments for patent, including claims 21-22 and 24-26 during the telephone discussion of 4-27-2006. [Record of Substance of the Discussion of 4-27-2006, pp.1-3]

IV.13. The O.A. item 23 is in error because of the following facts and reasons.

- (1) **The O.A. item 23 states:** “It is the position of the examiner that “robustly controlled” reads on the long term and short term control discussed by col.3, lines 13-20 of Harding.”
- (2) **Claim 26 recites:** “... .. whereby to robustly control said optical fiber drawing process by the double measurements of the bare fiber diameters from said measurement devices”.
- (3) **The O.A. is in error by cutting piece words “robustly controlled” out, and failing to read the claim as a whole and the reference as a whole.**
- (4) **Harding's “the long term and short term control is described by col. 3, lines 13-20 of Harding”, i.e.,** “Thus the control algorithm 21 functions to maintain long term control of the preform feed drive and will thus, in the situation described, attempt to increase slowly the preform feed rate to match the measured capstan speed. The capstan speed will still be subject to short-term adjustment by the diameter monitor 9 should that sense any deviation

from the preset diameter” [col.3, lines 13-20], but not as claimed in claim 26 by the double measurements of the bare fiber diameters from said measurement devices. Thus, **Harding’s process lacks what claim 26 recites above.**

(5) **Harding’s process has no “double measurements of the bare fiber diameters from the said measurement devices” and has no control based on “the deviation of the measurement of the first measurement location from the first preselected value, and the deviation of the measurement of the second measurement location from the second preselected value” as claimed in Claim 26.**

(6) **Here, the key is that Harding’s process omits the key feature steps and control operation principle in Claim 26 as recited in the above IV.6.**

(7) **Thus, the O.A. fails to follow MPEP 2141 and 2141.02 because the claimed “robustly control” as a whole should read “whereby to robustly control said optical fiber drawing process by the double measurements of the bare fiber diameters from said measurement devices”, that is lacked in the Harding’s teaching or suggestion.**

MPEP 2141 BASIC CONSIDERATIONS WHICH APPLY TO OBVIOUSNESS REJECTIONS

When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to:

(A) The claimed invention must be considered as a whole;

(B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;

(C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and

(D) Reasonable expectation of success is the standard with which obviousness is determined.

Hodosh v. Block Drug Co., Inc., 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

MPEP 2141.02: PRIOR ART MUST BE CONSIDERED IN ITS ENTIRETY, INCLUDING DISCLOSURES THAT TEACH AWAY FROM THE CLAIMS [Please see the above citation in IV.8]

IV.14. Item 24 of the O.A. is in error because of the following facts and reasons.

(1) **Item 24 states** “Harding did not teach measuring the optical fiber at two or more different locations before coating the fiber. Sumimoto taught similar methods of controlling glass fiber drawing and coating wherein a first and a second outer diameter measurement was taken

before the fiber was coated (see claims 1-4, the abstract, [0010] to [0013] and [0016] to [0018]). It would have been **obvious** to a person of ordinary skill in the art at the time the invention was made to incorporate a second fiber diameter measurement into the process of Harding because Sumimoto taught that it would have reduced the time necessary for increasing the drawing speed and the loss of preform or fiber would have been minimized.” [Emphasis is added to highlight the errors.]

(2) First, the above statement is in error because the fact is that Kohei (Sumitomo Elec. Ins.) taught his “methods of controlling glass fiber drawing and coating wherein a first” OR “a second outer diameter measurement was taken before the fiber was coated (see claims 1-4, the abstract, [0010] to [0013] and [0016] to [0018])” for his control [0007]. However, the O.A. states “wherein a first **and** a second outer diameter measurement”.

(3) Kohei’s Means for Solving his Subject [0007] recites:

“The invention method of the optical fiber manufacturing to achieve said objective is a manufacturing method which draws the optical fiber from the heated and melted optical fiber preform in a wire-drawing furnace; the feature of said method is that: at a drawing speed rising period of the optical fiber which is out from the wire-drawing furnace and in the measurement sight, the method uses a wide-sight measurement device located between the wire-drawing furnace and a narrow-sight outer diameter measurement device for the fiber diameter control to measure the optical fiber outer diameter, and at the time after a stable fiber drawing speed is reached, the method switches to using the narrow-sight measurement device to measure the optical fiber outer diameter.” [emphasis added]

(4) Thus, it is clear that Kohei’s process control operation principle as a whole is that his control uses a single measurement from only one, either a first or a second measurement device, at any particular control period or any time.

(5) Second, the O.A. fails to identify the principle of operation of the reference Kohei’s process.

(6) Third, the O.A. is in error because it states “It would have been **obvious to a person of ordinary skill ...”. [Please see the above full citation in (1)].**

- (7) **There is no any teaching or suggestion in the prior art or generally available knowledge for a person of ordinary skill in the art to do the proposed combination of Harding and Kohei or Saito. Please refer to the above section IV.3. The O.A. fails to follow MPEP 2141, 2142 and the court decisions therein.**
- (8) **What the O.A. states for the proposed combination is “because Sumimoto taught that it would have reduced the time necessary for increasing the drawing speed and the loss of preform or fiber would have been minimized”. [O.A. item 24]**
- (9) **However, the fact is that Kohei’s process is developed to solve Kohei’s mentioned problem and to reach Kohei’s goal of reducing “the time for raising the drawing speed and the optical fiber preform loss” (Kohei [0018]).**
- (10) **The above Kohei’s teaching goal has been completed by Kohei’s method itself. The O.A. states Kohei as “Sumimoto taught similar methods of controlling glass fiber drawing and coating” to Harding’s method [O.A. item 24].**
- (11) **Thus, to reach Kohei’s goal as the O.A. proposed, it would be just the Kohei’s method, and no combination of Harding and Kohei is required. There is no any motivation for the O.A. proposed combination from Kohei’s teaching or suggestion.**
- (12) **Therefore, based on the Kohei’s goal as stated in the O.A. item 24, there is no any motivation or teaching or suggestion for a person of ordinary skill in the art at the time the invention was made to incorporate a second fiber diameter measurement into the process of Harding because the Kohei’s method itself without combination is enough to complete the O.A. stated Kohei’s goal for fiber drawing process.**
- (13) **Even as proposed combination or modification, the resultant teachings of Harding and Kohei or Saito still omit the applicant’s claimed key steps in claim 26. Please see the above IV.6 – IV.7. The O.A. fails to follow MPEP 2143.03, 2141, and 706.02(j).**
- (14) **Furthermore, the proposed combination or modification changes the reference operation principles. Please see the above IV.8. The O.A. fails to follow MPEP 2143.01 and the court decision.**

(15) Please also see the above sections IV.3 – IV.10, including the prior art teaches away from claim 26. The O.A. fails to follow MPEP 2141.02 and the court decision.

(16) Thus, the O.A. rejection lacks reasonable grounds, and is in error. The O.A. fails to follow the 35 USC 103, court decisions and MPEP 706.02(j), 2141, 2141.02, 2142, 2143.01, 2143.03, as pointed out. [Please see the citations above.]

(17) Therefore, applicant respectfully submits that the O.A. item 24 is in error, and the rejection to Claim 26 is in error and should be withdrawn.

IV.15. Therefore, based on the above facts and evidences, the Law, the court decisions and the Office policy MPEP, Claim 26 is patentable over the prior art.

Therefore, based on the above facts and evidences, the Law, the court decisions and the Office policy MPEP, Applicant respectfully submits that the rejections on the references to Claim 26 are improper and should be withdrawn.

V. The O.A. Item 25 Is in Error Because It Fails to Consider Applicant's Previous Replies with Respect to Claims 21-22 and 24-26 in View of the Following Facts.

V.1. The O.A. item 25 [p.7] states: "Applicant's arguments with respect to claims 21-22 and 24-26 have been considered but are moot in view of the new ground(s) of rejection."

V.2. However, the fact is that the 9-6-2005 Reply Section IV [pp. 106-107] and the 12-5-2005 Reply Section IV [pp. 73-74] (as well as pages 44 and 50) have addressed Kohei's process and clearly shown that the claimed invention patentably differs from the prior art including Kohei.

As to Kohei, the 2-10-2006 O.A. (a final rejection) does not address any material traversed, which applicant presented through the facts, the objective evidences, the cited law, court decisions and MPEP in the 12-5-2006 Reply. But, that O.A. gives a final office action on 112-rejections only, and states "The arguments directed to the rejection under 35 USC 103 are moot, since the 35 USC 103 rejections are not

maintained” [2-10-2006 O.A. p.6, lines 4-5].

However, “since the 35 USC 103 rejections are not maintained”, the applicant’s arguments directed to the rejection under 35 USC 103 must be correct, and should be valid and still be valid.

Especially, the facts, the objective evidences, the cited law, court decisions and MPEP in the applicant’s Replies can not and will not be moot.

Now, the 7-26-2006 O.A. also fails to consider the facts, the objective evidences, the cited law, court decisions and MPEP as presented in the previous Replies, including the 12-5-2005 and 9-6-2005 Replies.

For example, the 12-5-2005 Reply (to the 6-6-2005 O.A.) recites [pp. 73-74]:

“III.11. Based on the Law, court decisions, fact, objective evidences, Office policy and the claims at issue as cited in the above and below, e.g., MPEP 706.02(j), 2141.02, 2142, 2143.01, 2143.03, 2145.III, 2145.X.D.2, , the present invention as claimed is patentable over the prior art.

IV. As to O.A. statement [p.24, L.10] “Kohei (JP 06-206734) is cited as being cumulative to Urruti”, Applicant submits that in view of Yoshimura, Urruti and Kohei, the clear and objective evidence of issuing these patents further clearly and strongly show that the claimed present invention is Unobvious and Patentable.

IV.1. Kohei’s process lacks the key features in the claimed present invention, such as:

- (1) outer diameter measurement of preform prior to entering furnace;**
- (2) double outer diameter measurements of the bare fiber after the furnace and prior to coating; and**
- (3) applicant’s novel control principles and methods.**

IV.2. Kohei’s process control uses only one bare fiber diameter measurement at any time: from device 21 at the beginning period or from device 14 at the time when the drawing speed reaches a predetermined speed, but not both at any time.

- Thus, Kohei’s process does not use double outer diameter measurements of the bare fiber for the fiber drawing process control.**
- Kohei clearly states his invention in section [Means for Solving the Subject] as follows: [Please see the above citation.]**
- It is very clear from Kohei’s teaching as a whole that at the time before the drawing speed of the optical fiber 13 reaches a prescribed drawing speed (100m/min), Kohei’s process uses bare fiber measurement from outer diameter measurement device 21; while at the time after the drawing**

speed reaches the prescribed drawing speed (100m/min), Kohei's process uses bare fiber measurement from outer diameter measurement device 14 by switching device 21 to device 14.

Also please see Kohei's teaching [col.3, paragraph 0012 – 0015] that clearly shows the fact that only one bare fiber diameter measurement is used at any time.

IV.3. The O.A. fails to address the feature of Kohei's process and fails to recognize the fact and objective evidence that Kohei's process lacks one or more key features of the claimed present invention as listed above, when the O.A. cites reference Kohei and states "Kohei (JP 06-206734) is cited as being cumulative to Urruti." [O.A. p.24, L.10]

IV.4. The issue of Yoshimura 5073179, Urruti 5551967 and Kohei JP 06-206734 is the objective evidence which shows that the present invention is Unobvious, otherwise these experts would have taught the present invention features.

- From Kohei's fig.1 and teaching [col. 2, paragraph 0007, col.3, paragraphs 0012-0015], it can be seen that Kohei's process is close to Yoshimura's fig.3 and teaching [col. 2, L.64-68].
- The applicant very respects Yoshimura, Urruti and Kohei's inventions, and honors their advanced work for optical fiber drawing process.
- At the same time, Applicant respectfully requests the PTO to honor the claimed present invention that is novel, useful and unobvious over the prior art."

V.3. The further facts are that 12-5-2005 Reply has addressed the followings.

- (1) **The proposed combination of Urruti and Yamamura is inoperable and the 6-6-2005 O.A. fails to follow MPEP 2143.01 and the court decision cited in MPEP 2142 [please see 12-5-2005 Reply II.1.1-II.1.2, pp.12-15].**
- (2) **There is no motivation to make the O.A. [6-6-2005] proposed combination or modification in the references and available public knowledge. Moreover, it is a fact that the O.A. [6-6-2005] fails to follow MPEP 2143.01 and the court decision because the proposed combination renders the prior art unsatisfactory for its intended purpose in view of the inoperable combination. Thus, there is no suggestion or motivation to make the proposed modification. [12-5-2005 Reply II.1.3, pp.15-16]**
- (3) **Furthermore, the O.A. [6-6-2005] does not follow MPEP 2143.03 because, even as modified or combined of Urruti in view of Yamamura, the resultant teachings still omit one or more of applicant's claimed features as recited. [12-5-2005 Reply II.1.4, p.17]**

- (4) The O.A. [6-6-2005] fails to consider objective evidence presented in the application indicating nonobviousness. [12-5-05 Reply II.1.7, pp.21-23]**
- (5) Claim 21 is Unobvious and Patentable over Harding 4793840 [12-5-2005 Reply II.2, pp.23-35].**
- (6) Claim 26 is Unobvious and Patentable Over Yoshimura 5073179 in view of Urruti 5551967 [12-5-2005 Reply II.3, pp.35-49].**
- (7) The O.A. [6-6-2005] fails to consider the presented further objective evidence and important facts as pointed out in 12-5-2006 Reply section II.4, pp. 50-52.**

V.4. Thus, the O.A. fails to consider the presented facts, objective evidences, features, grounds, the cited Laws, court decisions and MPEP in the previous Replies including 12-5-2005 Reply and 9-6-2005 Reply. If the O.A. had considered applicant's presented facts, objective evidence, grounds, arguments, the cited laws, court decisions and MPEP, the O.A. would have avoided the errors or mistakes as pointed out above.

VI. The Errors in the Office Actions, as Pointed Out in the Applicant's Replies, Further Clearly Show That the Claimed Invention Is Unobvious and Patentable Over the Prior Art, as the Fact and Evidence.

VI.1. The key time line of the Application, the Office Actions and the Corresponding Applicant's Replies is as follows.

- (1) On 12-04-2000, a Provisional Application of the present invention was filed.**
- (2) On 11-20-2001, the Application of the present invention was filed.**
- (3) On 1-17-2002, the case docketed to the first Examiner.**
- (4) On 5-3-2004, the Restriction/Election Requirement was mailed.**
- (5) On 7-30-2004, the first O.A. was mailed.**
- (6) On 10-18-2004, the first Reply was filed.**
- (7) On 2-14-2005, the 2nd O.A.—Final Rejection was mailed.**

- (8) On 4-7-2005, the 2nd Reply was filed.
- (9) On 4-18-2005, the 3rd O.A. – Advisory Action was mailed.
- (10) On 5-10-2005, the 3rd Reply with RCE was filed.
- (11) On 6-6-2005, the 4th O.A. was mailed.
- (12) On 9-6-2005, the 4th Reply was filed.
- (13) On 11-7-2005, the 5th O.A. – Office Communication/Miscellaneous Action was mailed.
- (14) On 12-5-2005, the 5th Reply was filed.
- (15) On 2-10-2006, the 6th O.A. – Final Rejection was mailed.
- (16) On 5-1-2006, the 6th Reply was filed.
- (17) On 5-10-2006, the 7th Reply with RCE was filed.
- (18) On 7-26-2006, the 7th O.A. was mailed.
- (19) On 10-25-2006, this current Reply will be mailed via the USPS express mail.

VI.2. The Office Actions have a series of errors because the rejections on 35 USC 102 and 103 are wrong, as specifically pointed out in the respective corresponding Replies.

(1) The 1st O.A. of 7-30-2004 made incorrect claim rejections:

– 35 USC 102 – by

- Harding 4793840 (1988); • Urruti 5551967 (1996);

– 35 USC 103 – by

- Pilkington GB-2238536; • Harding 4793840 in view of Urruti 5551967;
- Pilkington GB-2238536 in view of Harding 4793840 or Urruti 5551967;

and reference citations Ruba 6371394 (2002), Gansicke 6516636 (2003), and Kenmochi 6178778 (2001).

Please see the specific O.A. errors as pointed out in the Reply of 10-18-2004.

(2) The 2nd O.A. of 2-14-2005, a Final O.A., made incorrect claim rejections:

– 35 USC 102 – by

- Yoshimura 5073179 (1991); • Urruti 5551967 (1996);

– 35 USC 103(a) – by

- Yoshimura 5073179 in view of Yamamura 6220057 (2001);
- Urruti 5551967;
- Urruti 5551967 in view of Yamamura 6220057;

and a reference citation Kenmochi 6178778 (2001) and **two new reference citations Yoshimura 5073179 (1991) and Yamamura 6220057 (2001).**

Please see the specific O.A. errors as pointed out in the Reply of 4-7-2005.

- (3) The 3rd O.A. of 4-18-2005, an Advisory Action, insisted on incorrect claim rejections as listed above.**

Please see the specific O.A. errors as pointed out in the 5-10-2005 Reply with the RCE.

- (4) The 4th O.A. of 6-6-2005 made incorrect claim rejections:**

– 35 USC 103(a) – by

- Harding 4793840;
- Yoshimura 5073179 in view of Urruti 5551967;
- Urruti 5551967 in view of Yamamura 6220057;

and **one new Japanese reference citation Kohei JP 06-206734 (2002) with incorrect translation (9-23-2004).**

Please see the specific O.A. errors as pointed out in the 9-6-2005 Reply and this Reply.

- (5) The 5th O.A. of 11-7-2005, an Office Communication/Miscellaneous Action, made incorrect action and response to the 9-6-2005 Reply.**

Please see the specific O.A. errors as pointed out in the Reply of 12-5-2005.

- (6) The 6th O.A. of 2-10-2006, a Final O.A., made incorrect claim rejections – 35 USC 112. (35 USC 103 rejections are not maintained.)**

Please see the specific O.A. errors as pointed out in the Reply of 12-5-2005.

- (7) The 7th O.A. of 7-26-2006 made incorrect claim rejections:**

– 35 USC 103 – by

- Harding 4793840 in view of Yamamura 6220057;
- Harding 4793840 in view of Kohei JP 06-206734;

and **a new reference citation Saito 6438997 (2002).**

Please see the specific O.A. errors as pointed out in this Reply of 10-25-2006.

VI.3. Applicant respectfully submits that the errors in the Office Actions, as pointed out in Replies, clearly show that the claimed invention is unobvious and patentable over the prior art, as the fact and evidence.

VI.4. Applicant respectfully submits that continuously citing new reference one by one in new O.A., even in final O.A., and continuously making erroneous rejections (102 or 103) by using various inoperable combinations of reference in view of new citing reference, or various no-motivation combination or modification of references including new citing reference, or various combination or modification of references lacking the claimed key steps and novel control operation principles, are improper and should not be allowed because that continuously fail to follow the laws, decisions and MPEP. Four years and 11 months have been passed since the application was filed on 11-20-2001.

VI.5. Applicant respectfully requests the new Examiner's assistance for a timely issue via effective discussion and working together.

VI.6. Applicant very appreciates and respectfully further requests the Honorable PTO Leaders to help and guide the examination process to follow the laws, court decisions and MPEP.

VII. The Clear and Objective Evidence of the Issue of the References Patents Further Clearly and Strongly Show That the Claimed Present Invention Is Unobvious and Patentable.

VII.1. A series of the issued patents as cited references further prove that different measurements in a large complex process and control are challenging and unobvious to a person of ordinary skill in the art.

- Please refer to the prior art including cited Harding (1988), Yoshimura (1991), Urruti (1996), Kohei (JP 2002).
- Applicant highly honors these references and recognizes their inventions. At the same time, applicant respectfully requests the PTO to recognize his novel, useful and unobvious invention as claimed, including claim 21-22 and 24-26.

- Applicant was invited to present seminar by major optical fiber manufacturing company in the world.

VII.2. The objective evidence is that the prior art has No any teaching or suggestion to achieve the claimed present invention, even though a series of new inventions have been issued including Yoshimura, Urruti, and Kohei in more than a decade since Harding's invention in 1986 to the time when the present invention was submitted in 2000.

VII.3. The issue of Harding 4793840, Yoshimura 5073179, Urruti 5551967, Kohei JP 06-206734, as well as Yamamura 6220057 and Saito 6438997, is the objective evidence which shows that the present invention is Unobvious, otherwise these experts would have taught or suggested the present invention features.

- The applicant very respects all these inventors and their inventions, and honors their advanced work for the optical fiber drawing process.
- At the same time, Applicant respectfully requests the PTO to honor the claimed present invention that is novel, useful and unobvious over the prior art.

VII.4. More than a decade has passed since 1980's, it is the fact that all these respectable experts and inventors do not teach or suggest (i) double measurements of the bare fiber at any time, and (ii) preform measurement for the fiber drawing process control.

How can an ordinary skill be motivated to do double measurements of the bare fiber, to do preform measurement, to utilize calculated deviations of the preform measurement from a predetermined preform value, or to utilize calculated deviations of the first bare fiber diameter measurement and the second bare fiber diameter measurement from preselected diameter values, for controlling the preform feeding speed and the fiber drawing speed, as claimed in the present invention of the optical fiber drawing process?

VII.5. Applicant respectfully submits that in view of the prior art including Harding, Yoshimura, Urruti and Kohei, the clear and objective evidence of the issue of these patents further clearly and strongly show that the claimed present invention is Unobvious and Patentable.

VIII. Respectful Request for Reconsideration

From all of the above and the previously submitted Replies, it can be seen that the above amended Claims 21-22 and 24-26 of the present invention are patentable over the prior art.

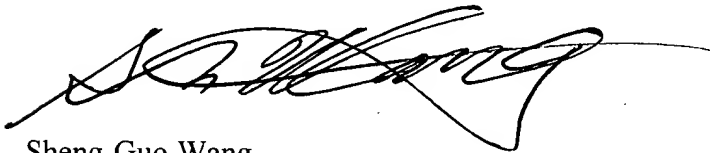
Therefore, Applicant respectfully requests the PTO for reconsideration.

IX. Conclusion

For all of the above reasons, applicant respectfully submits that the amended claims are now in proper form, and that the claims all define patentably over the prior art, with the new Examiner's helpful suggestions. Therefore applicant respectfully submits that this application is now in condition for allowance, which action he respectfully solicits.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Very respectfully,



Sheng-Guo Wang

704-503-0747

Oct. 25, 2006

----- Applicant Pro Se -----

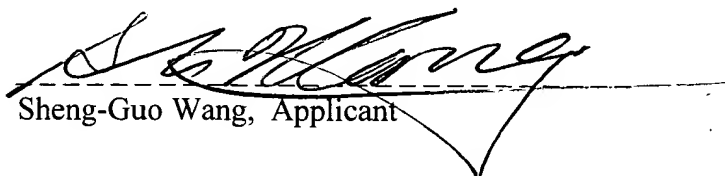
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Oct. 25, 2006



Sheng-Guo Wang, Applicant